

Operating Instructions for Class 3b or Class 4 Argon Laser:

1. Obtain the interlock key from the Permit Holder or Person in Charge of laser laboratory.
2. Ensure that all unauthorized people leave the room.
3. Secure the laboratory door then activate the laboratory interlock system. Be ready to turn the laser off if any unauthorized person or a person without laser safety eyewear enters the laboratory.
4. Have emergency telephone numbers readily available.
5. Ensure all users remove wristwatches or other reflective jewelry from their bodies.
6. Set up the optical component necessary for the experiment.
7. Check that all beam stops are in place and that there are no unnecessary reflective surfaces in the optical path. One block should be placed behind the first optical component. A second beam stop should be placed behind the second optical component etc.
8. Turn on the cooling water to the laser (if appropriate)
9. Set the laser power control to the lowest power possible.
10. Ensure that appropriate laser safety eyewear is worn by everyone in the laboratory.
11. Insert the interlock key into the laser switch and unlock the laser.
12. Announce loudly, with a short countdown that you are turning the laser on.
13. Turn the laser on.
14. Align the optical components starting with the component nearest the laser. When it is aligned, move the first beam block behind the third optical component. Repeat this procedure until the entire optical system is aligned. It is important that the laser beam be limited to one new component at a time until the system is aligned. This will minimize uncontrolled reflection during the alignment procedure.

DO NOT REMOVE YOUR SAFETY EYEWEAR DURING THE ALIGNMENT PHASE. IF YOU CANNOT SEE A FAINT IMAGE OF THE BEAM YOU HAVE THE WRONG OPTICAL DENSITY EYEWEAR.

TURN OFF THE LASER AND OBTAIN EYEWEAR WITH THE CORRECT OPTICAL DENSITY.

15. Increase beam power if necessary and complete the assigned task. Always use the lowest beam power necessary for the procedure.
16. Turn off the laser.
17. Remove your laser safety eyewear and place it in their proper storage area.
18. Allow the laser to cool down and then turn off the cooling water.
19. Remove the key from the laser interlock switch
20. Turn off the laboratory interlock system.
21. Return the key to the Permit Holder or Person in Charge.